

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of processing a substrate comprising:

growing a first ultra-thin oxide layer on a surface of the substrate to consume defects in a surface region of the substrate;

etching away at least a portion of the first ultra-thin oxide layer to remove at least some of said consumed defects from the substrate and reveal a subsurface of said substrate;

growing a second ultra-thin oxide layer on said subsurface of said substrate to consume more defects in said surface region of the substrate;

etching away at least a portion of the second ultra-thin oxide layer to remove at least some of said consumed more defects from the substrate;

monitoring said surface region of the substrate; and

repeatedly growing an addition ultra-thin oxide layer to consume additional defects and etching the additional oxide layer to remove the consumed additional defects based on said monitoring of said surface region wherein at least one of the etching steps comprises a plasma etch process.

Claim 2 (Original): The method of Claim 1, wherein said growing first and second ultra-thin oxide layers each comprise growing an oxide layer having a thickness of between approximately 5Å and approximately 15 Å.

Claim 3 (Cancelled).

Claim 4 (Previously Presented): The method of Claim 1, wherein said monitoring comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 5 (Original): The method of Claim 1, wherein the substrate comprises silicon.

Claim 6 (Original): The method of Claim 1, wherein the substrate comprises at least one of silicon and a silicon alloy.

Claim 7 (Original): The method of Claim 1, further comprising forming an additional layer on one of said first and second oxide layer using at least one of a thin film deposition process, an oxidation process, and an implantation process.

Claim 8 (Original): The method of Claim 1, wherein at least one of said etching steps comprises a dry vapor etch process.

Claim 9 (Canceled).

Claim 10 (Original): The method of Claim 1, wherein at least one of said etching steps comprises using a gas including at least one of a hydrogen containing gas, a fluorine containing gas, and a chlorine containing gas.

Claim 11 (Original): The method of Claim 10, wherein said using a gas comprises using a gas comprising at least one of HF, H₂, F₂, and C₁F₃.

Claim 12 (Original): The method of Claim 1, further comprising processing a plurality of substrates including said substrate, wherein each of said growing steps and each of said etching steps is performed on each of said plurality of substrates.

Claim 13-16 (Cancelled).

Claim 17 (Previously Presented): The method according to Claim 1, wherein said monitoring includes the imaging of a surface of the substrate after removal of one of said ultra-thin oxide layers.

Claim 18 (Previously Presented): The method according to Claim 5, wherein said monitoring includes the imaging of a silicon lattice at a surface of the substrate after removal of one of said ultra-thin oxide layers.

Claim 19 (Previously Presented): The method of Claim 17, wherein said imaging comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 20 (Previously Presented): The method of Claim 18, wherein said imaging comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 21 (New): The method of Claim 1, wherein said substrate comprises $\text{Si}(x)\text{Ge}(y)$.

Claim 22 (New): The method of Claim 21, wherein at least one of said growing steps comprises a plasma assisted process.

Claim 23 (New): The method of Claim 22, wherein each of said growing and etching steps comprises a plasma assisted process.